APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,698	01/09/2002	Isaac Bentolila	MET1.0002	7739

23386 7590 01/29/2008		EXAMINER	
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SUITE 1150		ART UNIT	PAPER NUMBER
IRVINE, CA 92612		2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/043,698	BENTOLILA ET AL.
	Examiner	Art Unit	
	James Sheleheda	2623	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2007*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Drawings

1.   The drawings are objected to because Fig. 5 incorrectly shows a transition matrix

with a transition *from* "5" *to* "on" and also from "5" to "2". The specification discloses

wherein Fig. 5 should show a transition *from* "on" *to* "5" *to* "2". (see page 50, lines 15-

18).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next

Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2.   Claim 2 is objected to because of the following informalities:

In claim 2, line 2, "the parameterized transition matrix" should be changed to --a

parameterized transition matrix-- as there is no previous recitation of this limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section .351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1, 5, 8, 9 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated

by Alexander et al. (Alexander) (6,177,931) (of record).

As to claim 1, Alexander discloses a method of determining a television viewer's

viewing habits (column 29, lines 31-55), comprising:

recording a viewer's monitor behavior with data item variables including watched

channel (column 28, lines 30-52), watching start time (column 28, lines 30-52) and

watching duration (column 28, lines 30-52);

from a server-side system, inputting historical data information regarding

demographic information tagged to the viewer (column 33, lines 8-15);

inputting program guide information (column 28, lines 30-52 and column 29, lines

31-55); and

at a client-side system (column 29, lines 14-21), associating the program guide

information with the viewer's monitor behavior (column 28, lines 30-52 and column 29,

lines 31-55) and defining therefrom a knowledge base with demographic cluster

information of the viewer in terms of statistical state machine transition models

(characterizing demographics and other information of the viewer based upon statistical

analysis of the users viewing transition data; column 29, line 31-column 30, line 37).

As to claim 5, Alexander discloses providing feedback information with the

viewer's monitor behavior (providing customized content based upon the viewer's

history; column 30, lines 45-58) by recording a click stream (recording the viewer's input

commands; column 28, lines 30-67).

As to claim 8, Alexander discloses a method of determining a television viewer's

viewing habits (column 29, lines 31-55), comprising:

capturing state transitions by defining monitor behavior in a plurality of statistical

state machine families each representing the viewing behavior of a particular viewer

(column 28, lines 30-52 and column 29, lines 31-55);

at a client-side system (column 29, lines 14-21), combining the statistical state

machine families (column 29, lines 31-55) into global statistical state machines defined

in a global probability density function (combined interactions to statistically determine

probable characteristics; column 29, line 31-column 30, line 37);

updating and reinforcing the global probability density function upon determining

that a given probability has a higher confidence level than a previous probability density

function (updating and reinforcing the determined probable characteristics; column 29,

lines 21-30); and

outputting a global profile based on the global probability density function,

wherein the global profile is suitable for determining programming content of a television

server (column 33, lines 8-15).

As to claim 9, Alexander discloses wherein the state transitions represent a

television viewer's recording a viewer's monitor behavior (column 28, lines 30-52) and

the statistical state machines are selected from the group consisting of watched channel

(column 28, lines 30-52), watching start time (column 28, lines 30-52) and watching

duration (column 28, lines 30-52).

As to claim 17, Alexander discloses wherein the data items have a probability

function with a confidence level (determining statistically likely characteristics of the

viewer; column 29, line 56-column 30, line 37), the method further comprising:

updating the historical data information upon determining that a given data item

has a probability function with a higher confidence level then a previous data item

(updating and reinforcing the determined probable characteristics; column 29, lines 21-

30).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 2-4, 10-13, 16 and 22-26 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Alexander in view of Grauch et al. (Grauch) (US 2005/0235318 A1)

(of record).

As to claims 2 and 24-26, while Alexander discloses defining a knowledge base,

he fails to specifically disclose calculating a parameterized transition matrix defining the

viewer's viewing habits, the parameterized transition matrix containing information of

program transitions initiated by the viewer, and wherein the row number and column

number of the element represent the first and second states.

In an analogous art, Grauch discloses a method of determining viewer's viewing

habits (paragraph 11-13) which will define the knowledge base by calculating a

parameterized transition matrix defining the viewer's viewing habits (Clickstream Data

matrix, 80; Figure 7 and paragraph 95), the parameterized transition matrix containing

information of program transitions initiated by the viewer (Figure 7 and paragraph 95)

and wherein the row number and column number of the element represent the first and

second states (as each element is represented by the its corresponding "event record" and "event ID" row and column; see Fig. 7) to provide an efficient system for collecting and combining a plurality of different information sources (paragraph 11-15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include calculating a parameterized transition matrix defining the viewer's viewing habits, the parameterized transition matrix containing information of program transitions initiated by the viewer, and wherein the row number and column number of the element represent the first and second states, as taught by Grauch, for the benefit of providing an efficient system for collecting and combining a plurality of different information sources.

As to claim 3, while Alexander discloses defining a knowledge base, he fails to specifically disclose defining at least two concurrent transition matrices including a channel matrix and a genre matrix.

In an analogous art, Grauch discloses a method of determining viewer's viewing habits (paragraph 11-13) which will define the knowledge base by calculating a parameterized transition matrix defining the viewer's viewing habits (Clickstream Data matrix, 80; Figure 7 and paragraph 95), the parameterized transition matrix containing information of program transitions initiated by the viewer (Figure 7 and paragraph 95), including a channel matrix (Clickstream Data 80 Channel ID, Figure 7) and a genre matrix (Content ID Prevue Guide Data 82, Figure 7) to provide an efficient system for collecting and combining a plurality of different information sources (paragraph 11-15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include defining at least two concurrent transition matrices including a channel matrix and a genre matrix, as taught by Grauch, for the benefit of providing an efficient system for collecting and combining a plurality of different information sources.

As to claim 4, while Alexander discloses defining a knowledge base, he fails to specifically disclose defining the transition matrix as a two-dimensional matrix with transitions from television channels to television channels in temporal form.

In an analogous art, Grauch discloses a method of determining viewer's viewing habits (paragraph 11-13) which will define the knowledge base by calculating a parameterized transition matrix defining the viewer's viewing habits (Clickstream Data matrix, 80; Figure 7 and paragraph 95) by defining the transition matrix as a two-dimensional matrix with transitions from television channels to television channels in temporal form (Figure 7 and paragraph 95) to provide an efficient system for collecting and combining a plurality of different information sources (paragraph 11-15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include defining the transition matrix as a two-dimensional matrix with transitions from television channels to television channels in temporal form, as taught by Grauch, for the benefit of providing an efficient system for collecting and combining a plurality of different information sources.

As to claim 22, Alexander and Grauch disclose wherein the parameterized transition matrix is in a temporal form (see Grauch at Fig. 7, indicating the clickstream matrix in temporal form, mapping user actions to time).

As to claim 23, Alexander and Grauch disclose wherein the transition matrix includes a first matrix for TV watching activities (see Grauch at Fig. 7) and a second matrix for TV channel surfing (see Grauch at paragraph 15 and Fig. 7).

As to claim 10, while Alexander discloses defining a knowledge base, he fails to specifically disclose wherein the global profile represents demographic cluster information of the viewer in terms of a statistical state machine transition matrix.

In an analogous art, Grauch discloses a method of determining viewer's viewing habits (paragraph 11-13) which will define the knowledge base by calculating a parameterized transition matrix defining the viewer's viewing habits (Clickstream Data matrix, 80; Figure 7 and paragraph 95) representing demographic cluster information of the viewer in terms of a statistical state machine transition matrix (Figure 7 and the information collected is what the system uses to determine demographic groups, paragraph 95 and 98) to provide an efficient system for collecting and combining a plurality of different information sources (paragraph 11-15).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include wherein the global profile represents demographic cluster information of the viewer in terms of a statistical state

machine transition matrix, as taught by Grauch, for the benefit of providing an efficient

system for collecting and combining a plurality of different information sources.

As to claim 11, while Alexander discloses defining a knowledge base, he fails to

specifically disclose wherein the state machines are defined in a parameterized

transition matrix defining the viewer's viewing habits, the transition matrix comprising an

element indicating information of a program transition initiated by the viewer.

In an analogous art, Grauch discloses a method of determining viewer's viewing

habits (paragraph 11-13) which will define the knowledge base by calculating a

parameterized transition matrix defining the viewer's viewing habits (Clickstream Data

matrix, 80; Figure 7 and paragraph 95) wherein the state machines are defined in a

parameterized transition matrix defining the viewer's viewing habits, the transition matrix

comprising an element indicating information of a program transition initiated by the

viewer (clickstream Data 80 Figure 7 and paragraph 95) to provide an efficient system

for collecting and combining a plurality of different information sources (paragraph 11-

15).

It would have been obvious to one of ordinary skill in the art at the time of

invention by applicant to modify Alexander's system to include wherein the global profile

represents demographic cluster information of the viewer in terms of a statistical state

machine transition matrix, as taught by Grauch, for the benefit of providing an efficient

system for collecting and combining a plurality of different information sources.

As to claim 12, Alexander and Grauch disclose wherein the transition matrix includes a first matrix for TV watching activities (see Grauch at Fig. 7) and a second matrix for TV channel surfing (see Grauch at paragraph 15 and Fig. 7).

As to claim 13, Alexander and Grauch disclose the computer-readable medium wherein the parameterized transition matrix is a two-dimensional matrix with transitions from television channels to television channels in temporal form (see Grauch at Figure 7 and paragraph 95).

As to claim 16, Alexander and Grauch disclose at the client-side system associating the program guide information with the viewer's monitor behavior and defining therefrom a knowledge base with demographic cluster information of the viewer (see Alexander at column 29, lines 31-67) in terms of statistical state machine transition matrices (see Grauch at Fig. 7, paragraphs 0091-0094).

7.   Claims 6, 7, 14, 15 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander and further in view of Konig (6,981,040) (of record).

As to claim 6, Alexander fails to specifically teach the method and corresponding computer readable medium which comprises parameterizing the viewer's monitor behavior with a pseudo hidden Markov process, and defining a low-level statistical state machine modeling a behavioral cluster and a top-level statistical state machine with active behavioral clusters and an interaction between the active behavioral clusters.

Konig, in an analogous art, discloses parameterizing the viewer's monitor

behavior with a double random pseudo hidden Markov process (Hidden Markov Model,

column 28 lines 14-18), and defining a low-level statistical state machine modeling

a behavioral cluster (any individual user model can also apply to a cluster of

users, column 14 lines 61-52, user response is monitored, column 27 lines 1-11 and

column 27 lines 49-55), and a top-level statistical state machine with active behavioral

clusters and an interaction between the active behavioral clusters (the documents are

evaluated using the user model to estimate the user interest column 29 lines 49-52).

Therefore, it would have been obvious to one of ordinary skill in the art to modify

Alexander's system to include parameterizing the viewer's monitor behavior with a

pseudo hidden Markov process, and defining a low-level statistical state machine

modeling a behavioral cluster and a top-level statistical state machine with active

behavioral clusters and an interaction between the active behavioral clusters, as taught

by Konig, for the benefit of allowing the system to make accurate models of viewer

usage in order to target the most relevant material towards the desired user or cluster of

users, as suggested by Konig, see Col. 3, lines 45-Col. 4, lines 16.

As to claims 7 and 18, Alexander and Konig disclose a method and

corresponding machine readable medium which comprises defining the pseudo hidden

double random process (wherein a hidden Markov process is double random; see Konig

at column 28, lines 17-78 and column 3, line 45-column 4, line 16) with a plurality of

dimensions and determining parallel statistical state machine transition events in at

least two of three state categories including channel, genre, and title (see Alexander at

column 29, lines 31-55 and column 28, lines 30-52).

As to claim 14, Alexander fails to specifically teach the method and

corresponding computer readable medium further comprising instructions for

parameterizing the viewer's monitor behavior with a pseudo hidden Markov process,

and defining a low-level statistical state machine modeling a behavioral cluster and a

top-level statistical state machine with active behavioral clusters and an interaction

between the active behavioral clusters.

Konig, in an analogous art, discloses parameterizing the viewer's monitor

behavior with a double random pseudo hidden Markov process (Hidden Markov Model,

column 28 lines 14-18), and defining a low-level statistical state machine modeling

a behavioral cluster (any individual user model can also apply to a cluster of

users, column 14 lines 61-52, user response is monitored, column 27 lines 1-11 and

column 27 lines 49-55), and a top-level statistical state machine with active behavioral

clusters and an interaction between the active behavioral clusters (the documents are

evaluated using the user model to estimate the user interest column 29 lines 49-52).

Therefore, it would have been obvious to one of ordinary skill in the art to modify

Alexander's system to include instructions for parameterizing the viewer's monitor

behavior with a pseudo hidden Markov process, and defining a low-level statistical state

machine modeling a behavioral cluster and a top-level statistical state machine with

active behavioral clusters and an interaction between the active behavioral clusters, as

taught by Konig, for the benefit of allowing the system to make accurate models of

viewer usage in order to target the most relevant material towards the desired user or

cluster of users, as suggested by Konig, see Col. 3, lines 45-Col. 4, lines 16).

As to claim 15, while Alexander discloses a method and corresponding machine

readable medium further comprising instructions for defining a plurality of dimensions

and determining parallel statistical state machine transition events in at least two of

three state categories including channel, genre, and title (column 29, lines 31-55 and

column 28, lines 30-52), he fails to specifically disclose a double random process.

Konig, in an analogous art, discloses parameterizing the viewer's monitor

behavior with a double random pseudo hidden Markov process (Hidden Markov Model,

column 28 lines 14-18), and defining a low-level statistical state machine modeling

a behavioral cluster (any individual user model can also apply to a cluster of

users, column 14 lines 61-52, user response is monitored, column 27 lines 1-11 and

column 27 lines 49-55), and a top-level statistical state machine with active behavioral

clusters and an interaction between the active behavioral clusters (the documents are

evaluated using the user model to estimate the user interest column 29 lines 49-52).

Therefore, it would have been obvious to one of ordinary skill in the art to modify

Alexander's system to include parameterizing the viewer's monitor behavior with a

pseudo hidden Markov process, as taught by Konig, for the benefit of allowing the

system to make accurate models of viewer usage in order to target the most relevant

material towards the desired user or cluster of users, as suggested by Konig, see Col. 3, lines 45-Col. 4, lines 16.

As to claim 19, Alexander and Konig disclose defining a low level statistical state machine modeling a behavioral cluster (see Alexander at column 29, lines 30-67), and a top level statistical state machine with active behavioral clusters and an interaction among the active behavioral clusters (see Alexander at column 29, lines 17-37).

As to claim 20, Alexander and Konig disclose wherein the pseudo hidden Markov process is a double random process (wherein a hidden Markov process is by definition a double random process).

As to claim 21, Alexander and Konig disclose defining a low level statistical state machine modeling a behavioral cluster (see Alexander at column 29, lines 30-67), and a top level statistical state machine with active behavioral clusters and an interaction among the active behavioral clusters (see Alexander at column 29, lines 17-37).

Response to Arguments

8.   Applicant's arguments with respect to claims 1 and 8, in regards to "at a client side system" have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments in regards to claims 2-4, 22 and 23 are not convincing, as

Grauch specifically discloses a rectangular array of elements which are *represented* by

rows and columns (see Fig. 7). Thus, each element of the array is represented by a

particular row and column, i.e. "Channel ID" represents particular channels and

"Content ID" represents titles. (see Fig. 7). Therefore, applicant's arguments are not

convincing.

Further, applicant argues that Grauch's table is not a "transition matrix". In

response, it is noted that the "clickstream" data of Grauch is specifically shown as a

matrix of data, which specifically includes transition data (power on, channel up, content

change, etc... see Fig. 7). This clearly meets the required claim limitation of a

"transition matrix". The supposed differences between Grauch and applicant's invention

are not required by the claims.

Conclusion

9.   The following are suggested formats for either a Certificate of Mailing or
Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with
all correspondence concerning this application or proceeding to establish a date of
mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in
such communication being considered as timely if the established date is within the
required period for reply. The Certificate should be signed by the individual actually
depositing or transmitting the correspondence or by an individual who, upon information
and belief, expects the correspondence to be mailed or transmitted in the normal course
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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.
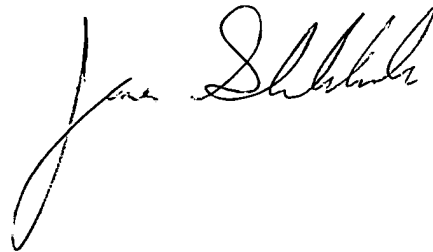
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (571) 272-7357. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James Sheleheda
Patent Examiner
Art Unit 2623

JS